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12th International Post Keynesian Conference

Kansas City, Missouri
September 25–28, 2014

Cosponsored by the University of Missouri–Kansas City, *Journal of Post Keynesian Economics*, and Levy Economics Institute of Bard College, with support from the Ford Foundation

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(8246 words –text, footnotes and references)

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Abstract (147 words)

Approaches that support the process of financial liberalization usually assume that free markets can ensure systemic adjustment in case of disequilibria without structural public interventions, and self-regulation mechanisms are more efficient than any collective regulatory mechanism. This article seeks to assess the irrelevance of these critical assumptions with regard to systemic viability in capitalist economies. These assumptions and related (de)regulatory (de)structural reforms implemented in the last decades reveal to be inconsistent with the characteristics of capitalist economies in light of the 2007-08 crisis. In the footsteps of Hyman Minsky, it maintains that financial instability and crises are endogenous phenomena in a capitalist economy and imply tight state intervention. It then argues that financial stability is a public matter and in order to reach societal efficiency and systemic viability, it is necessary to carry out a public organization of markets according to social/collective objectives beyond macro-prudential regulatory mechanisms.

Keywords: Financialization, financial crisis, liberalization, Minsky, regulation, viability

JEL Classification Codes: E12, G01, G18, H41

1. Introduction

This article seeks to assess the irrelevance of the assumptions that support the financial liberalization with regard to the viability of monetary capitalist economies. It maintains, in the footsteps of Hyman Minsky, that financial instability and crises are endogenous phenomena in a capitalist economy and imply tight state intervention[1]. But it aims at going beyond the dominant after-crisis fashion that contemplates *Obscure Economist's* financial instability analysis *in time of tumult* à la Wall Street Journal (Lahart, 2007). It then argues that in order to reach societal[2] efficiency and ensure systemic viability, it is necessary to carry out a public organization of markets according to social/collective objectives beyond macro-prudential regulatory mechanisms.

Economists usually assert that the well-known textbook economic theory of (perfectly competitive) market equilibrium is a good proxy for understanding the functioning of a capitalist economy. They maintain that price-oriented free market mechanisms would lead to an efficient social outcome, also called the full-employment economic equilibrium. Therefore, the role of the state should be limited to some (non-Leviathan but regalian) market-friendly incentives-enhancing missions, such as the protection of property, after-crisis recovery interventions (if necessary), self-control reinforcing regulation, etc. G. Akerlof and R. Shiller (2009, xi) note that this approach was passed from the economists to the think tankers, policy elites, and public intellectuals, and finally to the mass media. It became a political mantra:

[1] I prefer to use of the term "crisis" instead of "disequilibrium" because in a relevant alternative approach, the working of a monetary capitalist market economy (assumed to rest on the ethical principle of methodological individualism and on the efficiency of selfish private strategies) cannot result in systemic compatibility of decentralized decisions (except by low probabilistic magic). Consequently, "disequilibrium" must be reserved to the models of general or partial real equilibrium that assume implicitly or explicitly that the expected result - equilibrium - is already reached before the implementation of decentralized individual strategies as it is usually the case in standard economic models, including the so-called DSGE studies. In fact, the only way to be able to talk about disequilibrium is to assume that equilibrium (or multiple equilibria) could exist as a rule in decentralized markets and this should give the reference point for all economic reflexion. Thus it would be more appropriate to use the term of "viability" (Ülgen, 2013b) in the analysis of a capitalist economic society. Viability can be defined as the capacity/ability of an economic system to deal with systemic crisis situations without being obliged to call its major principles, rules and values into question (Ülgen, 2013a).

[2] Although "social" and "societal" are almost synonymous, "societal" relies more on the whole society while "social" may be used to designate also inter-individuals or individuals-society relations. In this sense, I use the adjective "societal" for societal efficiency (and not "social efficiency") to be distinguished from individual economic efficiency.

> "I am a believer in free markets". The belief that government should not interfere with people in pursuit of their own self-interest has influenced national policies across the globe. (…) as Keynes' legacy and the role of government have been challenged, the system of safeguards developed from the experience of the Great Depression has been eroded."

Therefore the (liberal) belief that unregulated free markets are the best way to guarantee economic efficiency and social welfare has gained strength and a "New Consensual Theory" (NCT) has become the basic reference of economic and financial (de)regulatory reforms everywhere in the world since the 1980s.

Indeed, after recurrent crises in developing but also in developed economies during the 1990s and 2000s, a re-arranged approach – called the "New Monetary Consensus" by R. Wray (2004) and the "New Consensus Macroeconomics" by P. Arestis (2009) - came into the picture. I call it hereafter the "New Consensual Theory" (NCT) which is a mix of New Classical and New Keynesian theories that results in an *opportunistic agglomeration* of the traditional Neo Classical model (the standardized partial equilibrium model of a market economy), the New Classical school (Application of Rational Expectations to the Economic Policy), the Real Business Cycle approach (economic disequilibria mainly coming from exogenous technological shocks and private agents' rational (voluntary) responses to such shocks) and the New Keynesian economics (multiple equilibria and DSGE models). This agglomeration aims at facing major theoretical and empirical critics about the inconsistency of decentralized markets' spontaneous equilibrium hypothesis and replaces the New neoclassical Synthesis of M. Goodfriend and R. King (1997) that had made official the "end of debates in the economics" and gave the Washington Consensus its academic recognition[3]. But this new consensus is not so new since it remains a non-monetary approach such as money and financial variables do not play any core role in economic evolution. It is also worth noting that this NCT is closely related to the paradigm of Free Markets Efficiency (FME).

Two critical assumptions of this agglomerated approach support the process of financial liberalization. First, free markets are assumed to ensure systemic adjustment in case of disequilibria without structural restrictive public interventions. And second, private/decentralized self-regulation mechanisms are supposed to be more efficient

[3] For a peculiar synthesis of such an evolution, see Woodford (2008).

than any collective regulatory mechanism. Those hypotheses reveal to be inconsistent with the characteristics of capitalist economies since the ongoing worldwide crisis casts doubt about the relevance of liberal policies and related (de)regulatory (de)structural reforms implemented in the last decades.

As J. Kregel (2009) maintains, the right diagnosis is more important than the cure that might be implemented in face of the systemic crisis. Unfortunately, the 2007-08 crisis did not permit the economic profession to leave its dominant beliefs and to adopt a more scientific stance in the analysis of market economies. The worst thing about it is that in spite of all one might have said to point to the systemic weaknesses and logic irrelevances of liberal finance and related theories and policies, doctrinal believers and their policy-maker followers paid scant regard to what have been suggested as alternative recovery ways to replace ill-fitted regulatory schemas. As a rule of thumb, for several decades, such a political choice has repeatedly resulted in more destabilized capitalism and large worrying crises all around the world.

To deal with this enduring issue, the second section reminds the doctrinal roots of financial liberalization that mainly rests on NCT-FME and shows that this results in a financialized economy. This leads to a new speculative regime of accumulation that is fuelled by continuous but unsustainable bubbles and hampers real growth.

The third section asserts, in a Minskyian tradition, that - given the structural characteristics of capitalism - financial instability is an endogenous phenomenon which is intensified by the process of financial liberalization. To develop such an assertion, it is argued that capitalism is a private-decision/expectation-based monetary economy which relies on debt relations. Viability of the accumulation process then lies in the systemic possibility to validate the debt structure by the realization of expected profits. However, in such a non-ergodic economy which evolves through growing interdependences, fallacy of composition and cognitive dissonance, there is no guarantee to validate the societal compatibility of separate decisions/actions.

Therefore, the fourth section sheds light on an elementary truth: the working of capitalism requires collective rules and mechanisms that must aim to organize and guide private actors' strategies with respect to systemic viability. It then maintains that system-wide threats requires an enforceable system-wide regulation since individuals' capacities are limited to their own interests and micro knowledge, and macro stability is

beyond their capacity. Such regulation is obviously related to two principles. First, monetary/financial stability has a peculiar status as a kind of specific collective good as it concerns the whole society and its viability conditions. And second, monetary/financial stability cannot be produced and consumed according to self-regulation models but calls for public intervention that must play the role of referee and stand outside of the private market relations in order to organize, supervise and regulate capitalist monetary and financial system. Those propositions result in an open-minded *5-S efficiency paradigm* that could replace the free markets efficiency belief. The last section concludes through a few basic implications and recommendations.

2. Efficiency, ergodic world and economists' tale: liberalization of capitalist finance and growth-hampering accumulation regime

The process of financial liberalization results in a new financialized accumulation regime that blocks real growth. This systemic transformation is related to a doctrinal and political will supported by the NCT-FME paradigm. F. Ülgen (2010) notes that the design of monetary and financial systems is determined following this paradigm, and, from the 1970s, regulatory models have been changed into private self-assessment schemas and allowed economic agents to adopt globally unconstrained market strategies. Free markets are assumed to provide economies with the best way to produce/consume as well as to resolve any possible disequilibrium as market prices are supposed to give fairly well[4] required information about assets' values and then make separate individual decisions globally compatible with each other[5]. Monetary and financial systems are regarded as technical details related to real equilibrium exchanges. Thus there is no room for specific analysis of sophisticated financial structures and related insolvency and illiquidity concerns that a capitalist economy can generate in its own evolution. The underlying hypothesis of complete markets indeed makes that instability is only conceivable under the (*ad hoc*) hypothesis of exogenous shocks (usually deemed to be minor frictions at systemic level)[6]. This hypothesis assumes an ergodic world which

[4] at least better than any other social system.

[5] For a detailed analysis of Fama-like hypotheses and models on FME, see Ülgen, 2011.

[6] Instability is regarded as an exogenous phenomenon mainly coming from policy errors or from institutional weaknesses. In this approach an institutional weakness means that market institutions are not good (complete/perfect) enough to allow private agents to undertake efficient profit-seeking activities. Therefore, improving institutions means structural transformations of society through better private property protection, externality reducing legislation, more open international competition and reduction of legal constraints over private initiatives. There is no room for elaboration and

leads to the blind faith in the efficiency of markets and in the relevance of liberal economic policies. Then P. Davidson (2012: 59) remarks that:

> "This ergodic axiom assumes the economic future is already predetermined. The economy is governed by an existing ergodic stochastic process. One merely has to calculate probability distributions regarding future prices and output to draw significant and reliable statistical inferences [information] about the future. Once self-interested decision makers have reliable information about the future, their actions on free markets will optimally allocate resources into those activities that will have the highest possible future returns thereby assuring global prosperity."

Such a hypothetical world of NCT-FME results in the assertion that self-regulation - without exogenous constraints and interventions - is better than any mechanism of public/societal regulation to guarantee systemic (macro) stability. The necessary institutional framework rests on market-friendly "good institutions" and incentives since market mechanisms' self-adjustment capacity could insure the resilience of economies against exogenous shocks. One may conclude from this that as prudential intervention would generate further constraints and costs on banking/financial activities, limit the freedom of action and reduce the efficiency of the resource allocation process it might be counterproductive. As stated in Ülgen (2015), several eminent authors maintain that detailed rules and restrictive standards are both burdensome and ineffective, but also counterproductive with regard to systemic stability (Barth *et al.* 2006). In this vein, A. Greenspan (1997) asserts that the consistent regulatory rule is to allow the private sector to put in place effective risk management systems letting markets foster financial innovation and reinforce accountability, compliance and disclosure of information.

The recommendations of the Basel Committee, from 1988 with Basel I's *Cooke ratio,* through 2004 Basel II's *McDonough ratio*, till today's after-2007 crisis Basel III's regulatory "reforms", encourage prudential arbitraging of financial actors and various internal rating procedures such as Internal Rating Based (IRB) and Rating Agencies' regular announcements about the soundness of banks, financial intermediaries (including rating agencies!) and innovated products and processes. Macro-prudential

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implementation of common objectives to improve social welfare through collective actions and organization since any collective/common objective and organization is suspected of being an anti-market/anti-freedom (and inefficient) mechanism.

supervision schemas, relying mainly on public authorities, are replaced by the mechanisms of micro-prudential regulation. The Independent Evaluation Office of the International Monetary Fund (IEO, 2011) states that:

> "The prevailing view among IMF staff -a cohesive group of macroeconomists- was that market discipline and self-regulation would be sufficient to stave off serious problems in financial institutions. They also believed that crises were unlikely to happen in advanced economies, where "sophisticated" financial markets could thrive safely with minimal regulation of a large and growing portion of the financial system."

Through such an environment a new economy emerges and mainly rests on short-sighted efficiency of engagements in deregulated markets. Financial innovations - permitted by loose regulatory principles - push individual decisions towards more speculative activities and support wrong beliefs about the sustainability of liberalized and financialized economies. New speculation-oriented financial products and processes fuel the new regime of (financial) accumulation related to the expected price rise of assets and transform financing relations into Ponzi structures à la Minsky. In the period before the 2007/08 crisis, the economy turns out to be a bubble environment based on real-estate-related debt leveraging in search of rapid capital gains:

> "The annual rise in land prices has far outstripped growth in national income since the late 1960s, becoming the driving force in today's financialized mode of "wealth creation" " (Hudson, 2010: 4).

This evolution of capitalism is quite continuous since the 1970s. It rests on deeply financialized profit-seeking activities that rely on the profitability of growing debt burden and inflating financial markets without any corresponding sustainable real growth. The regime of accumulation moves towards more short-term criteria, and financial operations[7] become the main helm of both economic decisions and public policies (Ülgen, 2013a). "Innovated banking" permits to finance large Leveraged Buy Outs (LBOs), takeovers and mergers in markets. Parallel to this, governments' deficits are financed in markets and accompany speculative growth all around the world. The

[7] New products and processes such as mortgage-backed securities, MBSs, Special Purpose Vehicles, SPVs, etc. directed towards speculative opportunities. For a detailed presentation, see Ülgen, 2010, 2011; Wray, 2012.

price-stability or inflation-targeting monetary policy leads to a generalized wage-deflation process, accompanied in the US by a sustained consumption thanks to low levels of interest rates and lax credit system that allows economic actors (including households) to spend more and more without regular income growing. Fernandez, Kaboub and Todorova (2008: 8-9) note that between 1980 and 2004, wage income hardly changed in the US while worker productivity was increasing by 68% and the Gini coefficient has been rising with a widening gap between the bottom and second quintiles and the top 20%.

When regular incomes do not increase, the only possibility to include large popular masses into the new accumulation regime is the easy (subprime) loans policy. Thus, the new accumulation schema (using a new speculative tool, the house industry through new mortgage techniques) is allowed by the rise in homeownership since 2001, after the end of the dotcom bubble. The spending-ease optimism generates confident expectations on continuously rising profits that increase the willingness to assume less sound liability structures. This speculative environment reinforces the willingness of lenders to accept low-yield assets regarding the lenders' risk as it was also noted in the 1980s by Minsky (1982: 122 and 282). A kind of attractive bubble and large optimism emerge over time and the euphoria generates pervasive transformations in portfolios the liquidity level of which subsequently decreases:

> "growth over the past few decades has been driven largely by rising household spending on consumption and residential investment. Consumption as a percent of GDP was 63% in 1980, 67% in 1998 and 70% in 2008. Since real wages were stagnant and real family income growth was slow, rising household spending was increasingly driven by the combined effects of rising debt and the increase in household wealth created by stock market and housing booms" (Crotty, 2009: 576)[8].

It is obvious that the financing of households' debt positions can only be continuous if the expected value of the real estate assets is growing enough in order to permit households to reimburse their debts, i.e. when the expected value of houses is at least as high as the commitments necessitate:

[8] As reported by Crotty (2009), household debt was 48% of GDP in 1985, about where it had been in 1965. But it grew to 66% by 1998 then accelerated to over 100% by late 2008.

> "In an ordinary home mortgage the primary source of the cash needed to fulfil the contract is the income of the homeowner. The secondary source or fallback source of cash is the market value of the mortgaged property" (Minsky, 1982: 19-20).

In the development of mortgage-backed financial relations, the primary source of the real estate industry (homeowners' regular income) was dethroned by the secondary source as the expansion of the market was founded on speculative expectations on the future market value of properties. As the evolution of this market value is related to bubbles' boom, banks and other financial intermediaries did not take care of the multiplication of commitments which fuelled bubbles. But such a financial system is naturally reckless and fragile[9]. Minsky shows that many of the real estate investment trusts that came upon hard times in 1974-75 in the US were, quite unknown to the household investors who bought their equities, involved in Ponzi schemes:

> "Many of these trusts were financing construction projects that had to be sold out quickly and at a favorable price if the debts to the trusts were to be paid. A tightening of mortgage credit brought on slowness of sales of finished construction, which led to a "present value reversal" for these projects" (1982: 106).

The instability is closely dependent on this reversal of the present value of real estate assets. As Minsky (1982: 30) remarks "Consumer and mortgage debt can become Ponzi-like only if actual wage income falls short of anticipated and other sources of disposal income". But this instable evolution of capitalist finance is not an exceptional phenomenon and it is regularly generated by the normal working of the economic system.

[9] Links between the 2007/08 crisis and the new accumulation regime's characteristics can be observed through two phenomena in the 2000s. First, households re-leveraged excessively rising consumption through increasing debt burdens and over-borrowing. This increase was supported by rising asset prices (housing and also equity). These new Ponzi-like borrowers and their funders were rested their expansion on negative amortisation mortgages. At the beginning, they were usual speculative borrowers who expected to be able to refinance their mortgages and debts in time thanks to the expected increase of market values of their assets. Second, at the same time loose credit standards among mortgage lenders reinforced the current credit cycle. This process spread to the corporate and financial system through the switch from equity to debt that took the form of LBOs that sustained the private equity and swelled the bulk of the equity market bubble. The optimism of lenders and borrowers is also driven by the growth in liquidity from hedge fund and private equity, feeding hot money funds. The fragile borrowers were able to obtain refinancing thanks to easy (speculative) credit on bubbly markets. The environment was then dominated by NINJA (no income, no job, no assets) relations.

3. Endogenous instability of financialized capitalism: some elements of proof

Instability is the inability of the financial system to face accumulated risks as those risks grow beyond the resilience of debt commitments regarding the bulk of imbalances. Such a definition focuses on the financial system as a whole, as opposed to micro-prudential approach-based analysis of risks. Financial instability then comes from the winding build-up of systemic fragilities often associated with aggressive risk-taking. Minsky (1986: 327) states that "financial instability is normal in capitalist economy; the tranquil era between 1946 and 1966 was an anomaly".

Actually, capitalism is a monetary economy in which private/decentralized decision-dependent economic activity relies on debt relations that involve bank credit and financial intermediation. The debt-financing process depends on private units' expectations about the future (but uncertain) profits. So the viability of the capitalist accumulation process lies in the systemic possibility to validate the debt structure by the realization of expected profits. However, in such a non-ergodic economy there is no guarantee to validate the societal compatibility of separate decisions/actions. Hence, the working of the economy requires some collective rules and mechanisms to organize and guide private actors' strategies with respect to systemic viability.

Those general characteristics of capitalism make Minskyian and (Post) Keynesian analytical arguments relevant to understand the evolution of financialized economies and recurrent instabilities. Ülgen (2014a: 577) specifies three major features in such economies: 1) They are monetary economies in which financial relations (rules, mechanisms and markets) play a central and crucial role; 2) They are complex societies that require specific institutions such that their evolution relies on the consistency of institutional patterns that shape (private/public) actors' behavior and determine systemic stability; 3) Those conditions are mainly macro-concerns and cannot rest on micro-regulatory mechanisms relating on private objectives.

Therefore, as maintained by several progressive economists (Palley, 2009; Kregel, 2010; Wray, 2012, to name but a few), an alternative analytical approach, the Financial Instability Hypothesis (FIH) of Minsky, becomes relevant to understand the pitfalls of the liberal finance and to suggest some lines of reforms to prevent (at least to reduce) systemic welfare-destroying crises. Minsky (1992: 2) explicitly defines his FIH with regard to the characteristics of capitalism:

> "The theoretical argument of the financial instability hypothesis starts from the characterization of the economy as a capitalist economy with expensive capital assets and a complex, sophisticated financial system. The economic problem is identified following Keynes as the "capital development of the economy," rather than the Knightian "allocation of given resources among alternative employments." The focus is on an accumulating capitalist economy that moves through real calendar time. The capital development of a capitalist economy is accompanied by exchanges of present money for future money. The present money pays for resources that go into the production of investment output, whereas the future money is the "profits" which will accrue to the capital asset owning firms (as the capital assets are used in production). As a result of the process by which investment is financed, the control over items in the capital stock by producing units is financed by liabilities - these are commitments to pay money at dates specified or as conditions arise."

In contrast to the liberal consensus about the self-adjusting nature of free markets, the FIH "can be seen as an alternative to the notion of efficient markets" (Whalen, 2012: 12) as it shows that bubbles and crises are endogenous features of capitalism. Minsky (1986) announces the fundamental propositions of the FIH through two systemic characteristics: capitalist market mechanisms cannot lead to a sustained, stable-price, full-employment equilibrium, and *serious business cycles are due to the financial attributes that are essential to capitalism*. Minsky (1982: 66) then states that capitalism, as a private debt-financing economy, is naturally instable:

> "Stable growth is inconsistent with the manner in which investment is determined in an economy in which debt-financed ownership of capital exists, and the extent to which such debt financing can be carried is market determined. It follows that the fundamental instability of a capitalist economy is upward. The tendency to transform doing well into a speculative investment boom is the basic instability in a capitalist economy."

From this perspective, the FIH assumes that financial instabilities are prepared during the periods of generalized euphoria in markets. A relevant QED (*quod erat demonstrandum*) for capitalist endogenous instability can be suggested through some

particular elements of the dynamics of euphoria and related supportive liberal policies that extended the life of the neoliberal model (Palley, 2010).

The first is the confusion between two opposed and (must-be) separated activities: to rate and to be rated (to judge and to be judged). The new regulatory environment aided and abetted the decline of the stability of banks and financial systems (Kregel, 2010) as it led to the increasing importance of rating agencies in the evaluation of the soundness and stability of banks and other financial intermediaries. This means that two contradictory activities coexist within these agencies: activity of advice and activity of rating. The elaboration of various categories of credit and their evaluation rely on the permanent intervention of agencies as technical advisers of banks. The assessment of the soundness of private institutions and specifically the disclosure of related information, which may be regarded as public goods, become dependent on private activity and interests of rating agencies. Those agencies are, indeed, both advisers in various financial set-ups of banks and financial intermediaries (especially for various structured credit vehicles) and evaluators of the quality of the same products, which obviously provokes conflict of interests. Large vested interests then determine actors' strategies since regulatory mechanisms become more and more dependent on agencies' ratings; banks, financial firms and their products to be rated are their core business![10] Furthermore, private rating usually generates pro-cyclical movement by feeding financial growth during the periods of boom and by abruptly stopping asset price evolution during the periods of distress (Sy, 2009). Consequently, rating agencies do not (cannot, as a matter of logic) play a stabilizing role against the formation of systemic bubbles.

Second, private actors and decentralized markets are continuously and genetically evolving through a specific phenomenon: the *macular degeneration.* In a liberalized and self-regulation based environment, private actors as well as regulators implement strategies to extend the period of expansion of short-term speculative positions. In such an environment, actors are unable to regard the evolution beyond the peripheral opportunities they can immediately perceive. Their expectations and behavior then become *blind to disaster* (Orléan, 2009). The policymakers also are under this tendency

[10] US SEC already questioned the risks inherent to the current mechanisms further to Enron and WorldCom scandals and underlined conflicts of interests (Securities and Exchange Commission, 2003).

(O'Hara, 2007; Palley, 2009) fuelled by *cognitive dissonance* (Akerlof, 2005). Indeed, in case of distress stemming from different contradictory information, individuals prefer trust in information that seems to them more suitable with regard their preferred desires. This means that people can manipulate their own beliefs by selecting sources of information likely to confirm "desired" beliefs[11]. When economic actors convince themselves that their decisions are relevant, they potentially make judgment errors due to the divergence between their beliefs and the true state of the world. We find again the opposition between the ergodic and the non ergodic, between uncertainty and certainty, between a market economy working on the model of decentralized monetary capitalism and a collective-planned economy working on the model of societal organization for social aims and objectives towards sustainable desired and directed changes.

Minsky (1991) underlines the fragile posture of micro-rationality as the working of markets rests on the subjective transformation of uncertainty into some probabilistic risk assessment calculations which ignore the true nature of the world. Keynes (1936: 153-154) remarks that the mass psychology allows individuals to enter into heroic but fragile positions on financial markets where precarious day-to-day fluctuations "tend to have an altogether excessive, and even an absurd, influence on the market".

It is obvious that at individual (microeconomic) level the true state of the world (e.g., the systemic macro situation) cannot be observed but *a posteriori*. This makes a crucial difference between micro-rationality and macro-stability. Related to this, our third analytical element is the fallacy of composition that points to the confusion between micro-rationality and macro-consistency of economic decisions. The decentralized monetary capitalist economy works under this fallacy such that the combination of individually rational (and/or efficient) decisions does not give an optimal economic system:

[11] Indeed, the preparation of the crisis reveals a very positive evaluation of asset prices in markets which rests on an implicit agreement (convention) that dictates actors' decisions. As long as markets believe that the potential of rising valuation of assets and activities is not yet reached, expectations about the future remain optimistic and continue to feed increasing speculative positions. Consequently, enterprises continue their debt-financing and debt-repayment strategies through LBOs while banks and financial intermediaries feed the production and circulation of very flexible and no capital requiring products (derivatives, options and futures) to make continuous financing of such operations possible. Markets remain confident as they expect further speculative gains with voracious appetite even though some warning indicators reach some critical levels. Actors believe that a possible crisis will occur only later and prefer to take positions with high expected yields and not to miss opportunities offered by the positive faiths on the future of markets. They are then totally blind to disaster however close it may be.

> "the fallacy of composition brings it about from time to time that individual actors all act rationally but in combination produce an irrational result, such as standing to get a better view as spectators of sport or, more dramatically, running for the exit in a theater fire" (Kindleberger, 1989: 243).

In case of distress, markets clear by rationing and this worsens information about borrowers and then implies more deterioration of monetary and financial relations. Decentralized individual decisions not only contribute to the accumulation of systemic fragilities but they are also pyromaniac in face of distress. Strategic individual reaction against risks - though useful during the periods of moderate fluctuations in markets – is ineffective during the periods of distress since dominant speculative profit-seeking short-term behavior increases pressures to sell assets and fuels pro-cyclic volatility of markets. So the liberal regulatory schema ignores the fallacy of composition and does then confuse micro-prudential regulation with macro-prudential supervision. In other words, individual efficiency of micro-rational decisions and societal efficiency of the whole economic system do not mean the same thing. Applied to financial markets, this means that the microeconomic-individual safety of establishments or products does not guarantee a sound and stable financial system[12].

Micro-prudential regulation only regards individual positons and capacities to deal with foreseeable risks at their own micro level. They cannot think about endogenous risks since this type of risk cannot be integrated into equilibrium and money-neutral models! Also, by composition, they cannot deal with the implications of linkages among individuals, between individuals and systemic dynamics and with the limits of individual actors' capacity to face the consequences of macro imbalances.

The fourth proof to be put to the fore in this analysis is the strong interconnectedness (direct/indirect linkages) among actors and markets that cannot be dealt with by separate actors and markets themselves. The interconnectedness is eminently a macroeconomic concern while the self-regulation is only based on individual evaluation and capacity. Through various and multiple contractual obligations, banks in the

[12] Indeed, when an establishment perceives an increase of risks related to its commitments, its rational behavior would usually consist in reducing its exposure by undoing its engagements. This individually rational behavior, when it is widened to a large number of establishments, provokes a crisis of illiquidity. In case of panic it may also generate systemic insolvency since agents would take position on the same side of the market in order to protect themselves against generalized insolvency.

interbank (money) market and financial intermediaries in financial markets (through the issue of various assets and financing operations), become exposed to one another and are closely related to financial contagion and spillovers. Highly liberalized financial environment allows banks to undertake various innovations through monetary and financial networks that create strong linkages and interdependences among different actors. Therefore, individuals' decisions and actions (microeconomic behavior) may generate multilateral and multi-level effects such as in period of uncontrollable disturbances, chain reactions in numerous markets may suddenly occur independently of previous expectations. This implies a specific analysis of the formation of modern financial systems as a complex network structure to understand contagion phenomena and direct and indirect channels of crisis transmission (Hale, Kapan and Minoiu, 2013).

The interpenetration and the deep links between different economies and firms make that the weight of idiosyncratic risks on systemic stability becomes decisive and the interconnections gain strength in the explanation of worldwide financial disequilibria. However, the lack of long-term macroeconomic vision makes the mechanisms of market coordination unable to be positively reactive in case of stress as they do not take into account the conditions of global viability of monetary systems. In this line, it seems to be possible to point to some regulatory implications for systemic stability through the opposition between self-regulation and public macro-prudential supervision.

4. New relevant regulatory design

There is no other domain in capitalism that calls for socially guided and controlled institutions than money and finance (Ülgen, 2014a). This is related to the peculiar nature of money which is *transversal* because all economic transactions rely on monetary relations:

> "Monetary and financial problems do structurally matter to all other sectors through the changes of strategies of the credit-money providers (banks) and of financial intermediaries. Hence, changes on money/financial markets affect the whole economy irrespective of decision units which are or are not involved in debt relations" (Ülgen, 2014b: 263).

Money is also *ambivalent* as it has a twofold nature that lies both in private decisions and public rules. Its creation lies in private decisions of banks and entrepreneurs based on profit expectations. At the same time, its general use and validity as a means of

payment and of general settlement depends on non-individual, public rules (Ülgen, 2013b). From this perspective, money is a social institution, a set of social rules that allow private economic units to undertake decentralized debt-based activities. Such debts circulate as money through the entire economy and thus involve the entire society. Therefore, the stability of monetary and financial relations determines systemic viability conditions, and requires collectively designed public regulation:

> "The fulfillment of the function of money is founded on a structure of normative and constitutive rules that support currency and regulate the behavior of its users. Political authority constitutes and enforces these rules, safeguarding at the same time the collective intentionality of its subjects. The identity of money should be understood in terms of these rules and consequently money should be defined as an institution" (Papadopoulos 2009: 967).

Regulation and regulatory institutions frame the economic integration process of the entire society. The private-interest based regulation, the well-known neoclassical incentives system, argues that constrained regulation and hands-on influence over financial systems cannot enhance financial soundness. It maintains that supervision mechanisms must encourage private monitoring of banks through sound contract enforcement systems. In case of fire, central banks and governments must intervene to calm down manic behavior. However, as the diagnosis of the crisis is not robust in this kind approach that fundamentally rests on the belief of well-working of free markets, the cure is not sustainable. As analyzed in Kregel (2009) and Wray (2012), the 2007-08 crisis is seen as a temporary liquidity crisis and central banks intervened through quantitative easing programs without regarding the structural weaknesses of liberalized speculation-oriented financial systems. Several years after their interventions and amazing amounts of money placed in rescue operations, capitalist finance still remains highly fragile and crisis-prone. In his study of some threats of financial crisis occurred in the post-war period, Minsky (1982) wisely argues that the central bank should use its monetary powers to guide the evolution of financial markets in directions that are compatible with financial stability in the longer run rather than improvise controls that put out fires but which allow the underlying market situation to remain unchanged.

In this vein, the alternative approach puts the emphasis on the failures of markets and neoclassical incentive mechanisms to deal with macro-stability concerns and advocates for powerful public regulatory and supervision agencies to directly monitor and discipline banks and financial institutions in order to improve macro stability and strengthen systemic viability. It maintains that the stability of the financial system is a public good which must be produced and managed through macro-regulatory frameworks. From this perspective, Minsky's FIH is relevant to understand capitalist evolution and then to suggest relevant alternative regulatory framework.

It is worth noting that systemic problems are the cumulative results of individual actions that imply collective actions since individuals' capacities are limited to their own interests and micro knowledge. As systemic problems resolution generates social advantages which are superior to private advantages and as every private individual unit would benefit from the resolution of such problems even if she/he does not contribute to any effort by her/himself, the reduction of system-wide threats requires an enforceable system-wide regulation. Such regulation is obviously related to two principles. First, monetary/financial stability has a peculiar status as a kind of specific collective good as it concerns the whole society and its viability conditions. And second, monetary/financial stability cannot be "produced/consumed" according to decentralized and anonymous market mechanisms but calls for public intervention that must play the role of referee and stand outside of the private market relations in order to organize, supervise and regulate capitalist monetary and financial system.

The endogenous nature of financial instability in capitalist economies makes relevant the policies that aim at sustaining domestic economic activity and the central banks that act as social organizers of financial markets. Such an alternative approach especially rests on the key role of public institutions in economic development. Beyond the crucial role of central banks as lenders of last resorts in case of systemic distress and as providers of valuable information about the evolution of markets, economic policies and societies through interest rates changes, public authorities must aim at organizing monetary and financial systems in an alternative way and leave the liberal ideological blindness to disaster. This alternative consists in organizing and framing market economies through the visible hand of the public power. It calls for more rigorous bank supervision and tighter regulation of financial markets that must be designed and

implemented at the systemic and global level in coherence with the core characteristics of monetary capitalist economies.

With regard to those assertions, one may wonder how can the lost reputation in the economics be regained after several decades of worldwide disasters? First, one should begin by abandoning the wrong, doctrinal, unscientific neoliberal beliefs of socially and economically efficient free markets and selfish individual strategies. Second, if one would continue to live in a free enterprise society, one should sustain societal efficiency-seeking public interventions aiming at making decentralized individual decisions and actions socially consistent according to collective objectives:

> "Re-regulation cannot therefore lie in some improved control devices of actors' behaviour in a liberal environment. It must be founded on alternative principles to cut financial markets' ardour down and push them to adopt less speculative strategies. That means, at least, the prevention of speculative positions through new regulatory rules, for instance by separating the financial intermediation and the traditional – productive system financing – bank activities. 'Finance to finance' and 'finance to produce' must be distinguished". (Ülgen, 2014b: 272-273)

Those objectives must then be designed and discussed through some common directions and consensus and not rest on the market (economic) efficiency criterion. This latter could be replaced by the open-minded *5-S efficiency paradigm*[13] that points to systemic stability and viability concerns:

1. Sage efficiency: rules, policies and measures/incentives must be judicious, prudent and acceptable with regard to the common objectives at philosophical as well as at political level;

2. Sailing efficiency: the design and the implementation of rules, policies and measures/incentives must be organized and directed transparently and with large participation from different social stakeholders. The governance of the society must be as democratic and open as possible and appear to be supra individuals, beyond local and group interests. In this case, errors and poor results can be discussed and corrected together whatever the responsibilities of the policymakers involved in the process;

[13] This paradigm aims at contributing to the debate about the reorganization/re-conception of economic society. It is not limited and can (must) be developed to include different aspects of social life in order to reach higher levels of development and wellbeing.

3. Societal efficiency: rules, policies and measures/incentives must aim at ensuring and improving the welfare and wellbeing of citizens in the entire society;

4. Stability efficiency: stability must be understood in a more general sense, e.g. macroeconomic stability, political stability, cohesive and inclusive stability;

5. Structural efficiency: rules, policies and measures/incentives must aim at strengthening society's foundations and cohesion among citizens through common objectives, rights and duties. Organization of markets must prevent free rider behavior and out of control strategies from financial institutions.

This paradigm is fed by various heterodox approaches such as Post Keynesian theories, evolutionary models and institutional economics. Groenewegen and Van der Steen (2007) maintain that contrary to traditional mainstream economics which claims a role for government only in the case of market failures, (Original) Institutional Economics explicitly gives government an interventionist role as a developer of industrial and technology policies. Following this, the emphasis must be put on the role of government as a developer of financial regulatory structure of monetary economies. This role is a crucial one as money and financial structure is the cornerstone of capitalism.

Concluding implications

This article argued that self-regulation rests on partial and subjective microeconomic criteria of individual units and cannot cope with systemic viability of monetary capitalist economies. More explicitly, NCT-FME models cannot consider, by definition, problems lying in the very characteristics of modern economies. Self-regulation paradigm entrusts market mechanisms with the care of correcting possible failures of market mechanisms themselves! Such a mode of regulation results in a highly liberalized and financialized economy that leads to a new speculation-based growth hampering accumulation regime. However, the sustainability of such a regime is extremely fragile because of the absence of long-term macroeconomic vision and the lack of consideration of the interconnectedness among private actors. These latters continuously suffer from macular degeneration while the economy they form evolves through the fallacy of composition. Hence, individual actors cannot take into account systemic instability concerns. By definition, these concerns are beyond their capacity and will and must be addressed towards collective rules and principles.

Therefore, two major features that characterize the liberal finance have to be ended in order to make capitalist economy a bit viable: the domination of self-regulation over the prudential public supervision of financial system and the domination of the micro-prudential approach over any macro-prudential framework of financial markets. Those propositions result in an open-minded *5-S efficiency paradigm* that could replace the free markets efficiency belief in favor of societal efficiency in order to cope with crisis-provoking capitalist finance evolution and its destructive consequences. Therefore it is obvious that the redesign of the regulatory framework is more than a simple intellectual matter of debate and requires strong voluntarist policies to direct financial markets towards positive supportive role in economic evolution. Financial stability depends mainly on the capacity of consistent organization of the financial system with regard to monetary and financial imbalances coming from behavior and expectations of diverse participants before they are transformed into a systemic crisis. It then seems to be obvious that macro-prudential regulation based principles must be substituted to micro-regulation schemas to address systemic instability issues and take into account counter-cyclical and systemic needs to stabilize the whole economy. That calls for modifications in the institutional structure of financial markets. Stronger macro-prudential regulation framework must be designed instead of market-friendly micro-prudential regulation and must aim at preventing short-sighted speculative activities and broadening sound finance to sustain productive activities. Minsky wisely maintains that "For the viability of economic relations, we have to imagine a good financial society in which the tendency by business and banks to engage in speculative finance is constrained" (1982: 69).

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